



# Madison County EMS



## CPAP Guideline

Continuous Positive Airway Pressure (CPAP) has been shown to rapidly improve vital signs, gas exchange, reduce the work of breathing, decrease the sense of dyspnea, and decrease the need for endotracheal intubation in patients who suffer from shortness of breath from asthma, COPD, pulmonary edema, CHF, and pneumonia. In patients with CHF, CPAP improves hemodynamics by reducing left ventricular preload and afterload.

### Indications:

1. Any patient who is in respiratory distress with signs and symptoms consistent with asthma, COPD, pulmonary edema, CHF, or pneumonia **and** who:
  - a. Is awake and able to follow commands
  - b. Is over 12 years old and is able to fit the CPAP mask to face
  - c. Has the ability to maintain an open airway
  - d. AND exhibits two or more of the following:
    - i. Has a spontaneous RR >25 breaths per minute
    - ii. Has SPO2 <94% at any time
    - iii. Uses accessory muscles during respirations.

### Contraindications:

1. Any patient suspected of having a pneumothorax or has suffered trauma to the chest
2. Any patient with a tracheostomy
3. Any patient who is actively vomiting or has upper GI bleeding
4. Any patient with facial trauma or an inability to gain a good seal when attaching mask to face

### Procedure:

1. Explain procedure to patient
2. Ensure adequate oxygen supply to ventilation device
3. Place the patient on continuous pulse oximetry, ETCO2, and ECG monitoring (if medic-level)
4. Place the delivery device over the mouth and nose
5. Secure the mask with provided straps or other provided devices
6. Use 5 cm H2O of PEEP based on manometer reading; 10 cm H2O is the max
7. Check for air leaks
8. Monitor and document the patient's respiratory response to treatment
9. Check and document vital signs every 5 minutes
10. Administer appropriate medication as certified (continuous nebulized Albuterol for COPD/Asthma and repeated administration of nitroglycerin tablets for CHF)
11. Continue to coach patient to keep mask in place and readjust as needed
12. If respiratory status deteriorates, remove device and consider intermittent positive pressure ventilation via BVM or secure airway appropriately.

### Removal Procedure:

1. CPAP therapy needs to be continuous and should not be removed unless the patient cannot tolerate the mask or experiences respiratory arrest or begins to vomit.
2. Intermittent positive pressure ventilation with a Bag-Valve-Mask, placement of an airway and/or endotracheal intubation should be considered if the patient is removed from CPAP therapy.



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### Special Notes:

1. Do not remove CPAP until hospital therapy is ready to be placed on patient.
2. Watch patient for gastric distention, which can result in vomiting.
3. Procedure can be performed on patient with a DNR.
4. Due to changes in left ventricular preload and afterload during CPAP therapy, a complete set of vital signs must be obtained every 5 minutes.